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DISCOURSE,

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DISCOURSE.

MR. PRESIDENT,

And Gentlemen of the Society—

IN accepting the honour of your renewed invitations to appear at this place, I have not been insensible of your kind preference ; and when you were pleased to intimate that the deep interest of science, in exhibitions of this nature, might be promoted by my co-operation, I considered it my imperative duty, to yield a cheerful compliance. When I endeavour to enforce those considerations which ought to operate upon us generally as men, and particularly as Americans, to attend to the cultivation of knowledge, you will not, I am persuaded, expect that I shall act the holiday orator, or attempt an ambitious parade, and ostentatious display, or a gaudy exhibition, which would neither suit the character of the society, the disposition of the speaker, the solemnity of the place, or the importance of the occasion. What I say, shall come strictly within the purview of the institution, shall be comprised in the language of unvarnished truth, and shall be directed with an exclusive view to advance the interests of literature. I shall not step aside to embellish or to dazzle, to cull a flower or to collect a gem. Truth, like beauty, needs not the aid of ornament, and the cause of knowledge requires no factitious assistance, for it stands on its own merits, supporting and supported by the primary interests of society, and deriving its effulgent light from the radiations of heaven.

Man without cultivation differs but little from the animals which resemble him in form. His ideas would be few and glimmering, and his meaning would be conveyed by signs or

by confused sounds. His food would be the acorn or locust—his habitation, the cave—his pillow, the rock—his bed, the leaves of the forest—his clothes, the skins of wild beasts. Destitute of accommodations, he would roam at large seeking for food, and evincing in all his actions, that the state of untutored nature is a state of war. If we cast our eyes over the pages of history, or view the existing state of the world, we will find that this description is not exaggerated or over-charged. Many nations are in a condition still more deplorable and debased, sunk to the level of brutes, and neither in the appearance of their bodies, or in the character of their minds, bearing a resemblance to civilized humanity. Others are somewhat more advanced, and begin to feel the day-spring from on high—while those that have been acclimated to virtue, and naturalized to intelligence, have passed through a severe course of experiments and a long ordeal of sufferings.

Almost all the calamities of man, except the physical evils which are inherent in his nature, are in a great measure to be imputed to erroneous views of religion or bad systems of government; and these cannot be co-existent for any considerable time with an extensive diffusion of knowledge. Either the predominance of intelligence will destroy the government, or the government will destroy it. Either it will extirpate superstition and enthusiasm, or they will contaminate its purity, and prostrate its usefulness. Knowledge is the cause as well as the effect of good government. No system of government can answer the benign purposes of the social combinations of man, which is not predicated on liberty; and no creed of religion can sustain unsullied purity or support its high destination, which is mingled with the corruptions of human government. Christianity is in its essence, its doctrines and its forms, republican: It teaches our descent from a common parent: it inculcates the natural equality of mankind; and it points to our origin and our end, to our nativity and our graves, and to our immortal destinies, as illustrations of this impressive truth. But at an early period it was pressed into the service of the potentates of the earth; the unnatural union

of church and state was consummated; and the sceptre of Constantine was supported by the cross of Jesus. The light of knowledge was shut out from the general mass, and confined to the select organs of tyranny; and man was for ages enveloped in the thickest gloom of intellectual and moral darkness. At the present crisis in human affairs, we perceive a great and portentous contest between power and liberty—between the monarchical and the representative systems. The agonies and convulsions of resuscitating nature have agitated the nations, and before they are restored to their rights and the world to its repose, the hand of famine, the scythe of pestilence, and the sword of depopulation, will fill up the measure of human calamity.

The present state of the world exhibits an extraordinary aspect. In former times, it was the policy of the sovereign to encourage eminent merit in literature, science and the arts. The glory that was radiated on intellectual excellence was reflected back on the government; but these dispensations of munificence, were confined to the Aristotles, the Virgils, and the Plinys of the age. The body of the people were kept in a state of profound ignorance, and considered as the profanum vulgus, to be employed as hewers of wood and drawers of water, and to be used as beasts of burden or of prey, as the policy or the caprice of the depot should prescribe.

The revolution effected by the invention of printing, has created a corps of literary men in the cities, the universities, the academies, the lyceums, and philosophical societies, of the most arbitrary governments of Europe, which have exercised an influence over public opinion almost irresistible. Man is the creature of imitation and sympathy: and however callous the sovereign might be to public opinion, yet it predominated over his ministers, who in reality wielded the sceptre. The consequence was, that a more extensive diffusion of knowledge was promoted, and the blessings of instruction visited the cottage as well as the palace. Monitorial schools and religious societies were generally established, and the sunshine of mental and moral illumination penetrated the darkness which co-

vered the nations. To know our rights is to assert them. The principles of the American revolution became the text-book of liberty, and its practical commentaries are to be read in the events now occurring in various parts of the globe. Greece has unfurled the holy standard of liberty, and waves it in defiance over the crescent of Mahomet. Spanish America is breaking the chains of tyranny ;—Spain and Portugal have drawn the sword in vindication of the rights of man : Public opinion is operating with magic influence in Great Britain in favour of the oppressed nations ; and the result will show, that the physical strength of Europe must follow the train of its moral power. It is in vain to say, that the people now in commotion are unfit for free government. Conceding the fact, it avails nothing in the argument. The human character is principally moulded by knowledge, religion, freedom, and government. The free states of Greece exhibited different aspects of mind, of manners, and of morals. But we no longer remark, as a distinguishing characteristic, the ethereal spirit of the Athenian, the pastoral simplicity of the Arcadian, the stupidity of the Bœotian, or the laconic brevity of the Spartan.* The sweeping hand of despotism has confounded in one mass all the delicate colouring, the lights and shades of the picture. In revolutionary times great talents and great virtues, as well as great vices and great follies, spring into being. The energies of our nature are put into requisition, and during the whirlwind and the tempest, innumerable evils will be perpetrated. But all the transient mischiefs of revolutions are mild when compared with the permanent calamities of arbitrary power. The one is a sweeping deluge, an awful tornado, which quickly passes away—but the other is a volcano, continually ejecting rivers of lava—an earthquake burying whole countries in ruin. The alleged inaptitude of man for liberty, is the effect of the oppressions which he has suffered : and until a free government can shed its propitious influence over time—until, perhaps, a new generation has risen up under the new order of things, with new habits and new princi-

* Hughes' Travels in Greece.

ples, society will be in a state of agitation and mutation, faction will be lord of the ascendant, and frenzy and fury, denunciation and proscription, will be the order of the day. The dilemma is inevitable. Either the happiness of the many, or the predominance of the few, must be sacrificed. The flame of liberty and the light of knowledge, emanate from the same sacred fire, and subsist on the same aliment : And the seeds of instruction widely disseminated, will, like the serpent's teeth in the pagan mythology, that were sown into the earth, rise up against oppression in the shape of the iron men of Cadmus. In such a cause, who can hesitate to make an election ? The factions and convulsions of free governments, are not so sanguinary in character, or terrific in effects, as the animosities and intestine wars of monarchies, about the succession—the insurrections of the military—the proscriptions of the priesthood, and the cruelties of the administration. The spirit of a republic is the friend, and the genius of a monarchy is the enemy of peace. The potentates of the earth have, for centuries back, maintained large standing armies, and on the most frivolous pretexts, have created havoc and desolation : And when we compare the world, as it is under arbitrary power, with the world as it was under free republics, what an awful contrast does it exhibit ! What a solemn lesson does it inculcate ! The ministers of famine and pestilence, of death and destruction, have formed the van, and brought up the rear, of despotic authority. The monuments of the arts—the fabrics of genius and skill, and the sublime erections of piety and science, have been prostrated in the dust ; and the places where Demosthenes and Cicero spoke, where Homer and Virgil sang, and where Plato and Aristotle taught, are now exhibited as mementos of the perishable nature of human glory. The forum of Rome is converted into a market for cattle :† the sacred fountain of Castalia is surrounded, not by the muses and graces, but by the semi-barbarous girls of Albania :‡ the laurel groves, and the deified heights of Parnassus, are the asylum of banditti :—Babylon can only be traced by its bricks :—

† Eustace's Italy,

‡ Hughes' Travels.

The sands of the desert have overwhelmed the splendid city of Palmyra, and are daily encroaching on the fertile territories of the Nile : and the malaria has driven man from the fairest portions of Italy, and pursued him to the very gates of the Eternal City.

Considerations like these announce to us in the most impressive manner, the importance of our position in the civilized world, and the necessity of maintaining it. The reciprocal action of knowledge and free government on each other, partake in some measure, of the character of identity : for wherever liberty is firmly established, knowledge must be a necessary concomitant. And if we desire to occupy this exalted ground—if we wish to improve, to extend, and to perpetuate the blessings of freedom, it is essential, absolutely essential, to improve, to extend, and to perpetuate the blessings of education. Let us not deceive ourselves by the delusions of overweening confidence, and the chimeras of impregnable security, and fondly suppose that we are to rise superior to the calamities of other nations. Our climate is salubrious, and we are free from pestilence—our soil is fertile, and famine is a stranger—our character is pacific, and war is a rare occurrence ; but if we only suppose a relaxation of the sinews of industry, and the presence of a tiger-like thirst for human blood, then the consequent neglect of productive industry, and the vast accumulation of taxes, would drain the resources of individuals, and impoverish the public treasury ; and plague and famine, poverty and depopulation, would follow in the train of pre-existing calamities. Nor is it to be concealed, that dangers of the most formidable nature may assail us from other sources—some peculiar to our situation, and others that are common to all free states.

Faction and luxury—the love of money, and the love of power, were the hydra-headed monsters that destroyed the ancient republics. At the time that the Roman commonwealth was overturned, all ranks of men were so corrupted, that tables were publicly set out, upon which the candidates for offices were professedly ready to pay the people the price of their

votes ; and they came not only to give their voices to the man who had bought them, but with all manner of weapons to fight for him. Hence it often happened, that they did not part without polluting the tribunal with blood and murder, and the city was a perpetual scene of anarchy.* The justice of heaven pursued the perpetrators of these enormities, and Rome was scourged with a series of the most detestable tyrants that ever disgraced the character of humanity. Although corruption will not at first present itself under such hideous forms, yet its approaches will be insidious, undermining and dangerous. It will appeal to cupidity and to ambition, by magnificent promises and by donatives of office, if not by largesses of money. Good men are too often lethargic and inactive—bad men are generally bold and adventurous. And unless arrested by the vigilant intelligence and virtuous indignation of the community, faction will, in process of time, contaminate all the sources of public prosperity—a deleterious poison will be infused into the vital principles of the body politic—intrigue, ignorance, and impudence will be the passports to public honors—and the question will be, not whether the man is fit for the office, but whether the office is fit for the man. In this crisis of the republic, its degenerate and unprincipled sons will unite in a common crusade against the public good, and will encircle the land with a cordon of corrupt and daring spirits, like the peccant humours of the body, which, in a dangerous disease, collect in the morbid part of the system.

There are also peculiar circumstances in our situation, which ought to silence high-toned arrogance, and admonish us of the dangers which surround us. The experiment of a great empire, founded on the federative principle, has not been fully tested by the efflux of time and the pressure of events. The ancient democracies, where the people legislated in person, were ruined by the smallness of their area. The impulses of faction were sudden, unchecked, and overwhelming. An extensive republic, like ours, may be destroyed by

* Plutarch.

a conspiracy of the members against the head, or the power of government may be spent as it extends, like a circle in the water which is lost by its own expansion. And an apprehension of this occurrence may induce the establishment of standing armies in the extremities of the empire, which, as in the days of ancient Rome, will rush to the capital, to divide the spoils of power and wealth. Nor is it to be concealed that a spirit is active in the community, which tends to the destruction of the union, and the consequent subversion of the best hopes of man. It may be considered as giving too much in to refinement, to intimate that the sectional prejudices which prevail in certain parts of the union, may be derived from hereditary antipathies and feelings, and that as the eastern states were chiefly settled by the Puritans or Roundheads of England, and the principal southern states by the Cavaliers or Royalists, a diversity of manners was entailed on their progeny, which has tended to increase and exasperate the ancient animosities that were at the same time transmitted. I shall not, although I should be fortified by the great names of Aristotle, Bacon, Berkeley, Buffon and Montesquieu, rely on the operation of physical causes, although perhaps they are not without their influence. It was the opinion of the Stagyrte, that the climate of Greece was the best possible one for the production of great men. The Greeks, said he, hold a middle place in physical and moral qualities, as well as topographical situation, between the northern Europeans and the southern Asiatics, possessing the courage of the former, without their torpor of intellect, and the ingenuity of the latter, without their abject disposition. Lord Bacon has observed, that the inhabitants of the south are in general more ingenious than those of the north, but that where the native of a cold climate has genius, he rises to a higher pitch than can be realized by the southern wits. And Bishop Berkeley* has illustrated this opinion by comparing the southern wits to cucumbers, which are commonly all good in their kind, but at best are an insipid fruit, while the northern geniuses are like melons, of

* Berkeley's Minute Philosopher.

which not one in fifty is good, but when it is so it has an exquisite relish. However pertinent this doctrine may be, where it was intended to apply, it can have but little weight in reference to us. The difference of latitude and temperature is not so great as to produce the predicated results; and so far as facts can be ascertained, they will not bear out the ascription. It is probable that the causes so much to be deprecated, come under the denomination of moral. and are to be found in slavery; for wherever it prevails, it generates an anti-commercial and an anti-manufacturing spirit, and at the same time it produces a lofty sense of independence, which is among the strongest preservatives of our republican governments. In the other states, where commerce and manufactures are cultivated as well as agriculture, there is no real collision of interest with the states purely agricultural. There is, on the contrary, an identity; and although the prosperity of each, is the prosperity of all, yet jealousies will spring out of the legislative encouragement and protection of these great interests. To encourage the fabrics of art, is to encourage the fabrics of nature—to protect manufactures, is to advance the growth of the raw materials of which they are made—to countenance commerce, is to countenance cheapness of transportation and goodness of market—and to promote the wealth of any member or section of the union, is to enhance its ability to use the fabrics, and to consume the productions of the other. The growing expansion of liberal feelings, and the illuminating progress of political philosophy, have had a salutary tendency in checking prejudices and antipathies which have too much prevailed. But little to our honor, I speak it with regret, they have been recently excited by a contest of equestrian swiftness. In the olympic games, where enlightened Greece assembled, where Homer recited his poem and Thucydides his history, the laurelled crown, the “palma nobilis”* was awarded to the man, not to the beast; but the late display reminds us of the degenerate days of Rome, when a horse was raised to the honors of the consulship; and of the

* Horace.

Prasini and the Veneti, the green and blue factions, which arose from those colors of livery in horse races, and which accelerated, if not occasioned the ruin of the Greek empire.*

The necessity of counteracting the tendency of all human institutions to debasement—of guarding with efficacious circumspection against the advances of anarchy and tyranny, and of preventing the evils to which we are peculiarly exposed, from expanded territory and geographical prejudices, must be obvious ; and for this purpose, it is essential to attend, with increased zeal, to the great interests of education, and to promote, with unrelaxed fervor, the sacred cause of science. Education includes moral as well as intellectual culture—the georgics of the heart as well of the head ; and we must emphatically look up to a general diffusion of knowledge as the palladium of a free government—the guarantee of the representative system, and the ægis of our federative existence.

Is it necessary, on this occasion, to show the important connexion between science and all the arts, which contribute to the sustenance, the accommodation, and the embellishment of human life ? The analytic researches of chemistry have opened to us a knowledge of the constituent parts of soils, minerals, vegetables, and other substances, and have developed their useful application. From the first conception of the propulsion of vessels by steam, by the Marquis of Worcester, to its consummation by Fulton, how slow was the progress—how difficult the accomplishment ! And this could never have been effected, had it not received the aids of chemical discovery, of mathematical calculation, and of mechanical philosophy. All that relates to the economy of labor by machinery—to the facilitation of intercourse by canals and bridges—to naval, civil, and military architecture—to the improvement of agriculture—to the advancement of the mechanic arts—must be derived directly, or indirectly, from scientific research.

It is an ordinance of heaven, that man must be employed, or be unhappy. Mental or corporeal labor is the destination

* Gibbon.

of his nature ; and when he ceases to be active, he ceases to be useful, and descends to the level of vegetable life : And certainly those pursuits which call into activity his intellectual powers, must contribute most to his felicity, his dignity and his usefulness. The vigorous direction of an active mind to the accomplishment of good objects, forms its most extatic delights. “*Hæc studia adolescentiam alunt, senectutem oblectant, secundas res ornant, adversis perfugium ac solatium præbent, delectant domi, non impediunt foris, pernoctant nobiscum, peregrinantur, rusticantur.*”*

The honor and glory of a nation consists in the illustrious achievements of its sons in the cabinet and in the field—in the science and learning which compose the knowledge of man—in the arts and inventions which administer to his accommodation, and in the virtues which exalt his character. Scarcely two centuries have elapsed since the settlement of these United States, and in that period we have seen a WASHINGTON, a HENRY, a FRANKLIN, a RITTENHOUSE, and a FULTON—the most splendid names in war, in eloquence, in philosophy, in astronomy, and in mechanics, which the world has ever witnessed. The congress of patriots who proclaimed our independence in the face of an admiring world, and in the view of approving heaven, have descended, with three exceptions, to the grave ; and in this illustrious band were comprised more virtue, and wisdom, and patriotism, and energy, than in any association of ancient or modern times. I might proceed, and pronounce an eulogium on our savans who have illustrated philosophy and the exact sciences—on our literati, who have explored the depths and ascended the heights of knowledge—on our poets, who have strung the lyre of Apollo—on our painters, who have combined the sublime and the beautiful in the graphic art—on our statesmen, who have taught the ways and means of establishing the greatest happiness of the greatest number—and on our theologians, who have vindicated the ways of God to man. But I forbear. The task of selection is at all times invidious ; and most of

*Cicero.

the distinguished men to whom I allude, are still living, and probably some of them are now present: And I ought certainly neither to offend their modesty, nor violate my sense of self-respect, by the obtrusion of praise which is not required by the occasion, and which will be more suitably, and unquestionably most liberally, dispensed by future times.

When we consider the small areas in which the insignia of human greatness have been displayed, we will find equal cause for astonishment and exultation. Attica was not more extensive than some of our counties, and the whole of Greece did not exceed this state in dimensions. Rome, for a long period, did not cover as great an extent: And the Swiss Cantons, the United Netherlands and England, when compared with the illustrious men and the illustrious deeds of which they can boast, are of a very limited space. The United States contain more than a twentieth part of the land of this globe, and not 600,000 square miles less than the whole of Europe. The Deity has placed us on a mighty continent: The plastic hand of nature has operated on a stupendous scale: Our rivers and lakes—our cataracts and mountains—our soil and climate—bear the impress of greatness, of fertility, of salubrity. In this spacious theatre, replete with the sublime and the beautiful, let us act a correspondent part. This state, which now has a population of a million and a half, is capable of supporting ten millions of souls, and before this century closes, this maximum will be attained. And if in the councils of the Almighty it is decreed, that we shall continue to advance in all that can render a people intelligent and virtuous, prosperous and happy, with what reverence will posterity regard the memory of those who have laid the foundation of such greatness and renown!

The elementary parts of education in common schools, are the substrata of the studies of the academy and the college—and then again the acquisitions of those institutions become the basis of professional pursuits in divinity, law, or medicine, and the foundation of that information which leads to more momentous advances in the cabinet, the senate, or the field—

which penetrates the regions of discovery and invention, and which enlightens the world by literary disquisition and scientific investigation. Giving full credit to all the benefits derived from the prescribed courses of collegiate studies, perhaps the faculties of young men are more powerfully evolved by institutions like the present, which generate habits of observation and reflection, and which produce ability in composition and facility in public speaking. And equally striking are the benefits of the extensive libraries within reach, where the "relics of the ancient saints of literature, full of true virtue and without delusion or imposture,"* and the oblations and offerings of the votaries of learning in other times, are preserved.

The field of honor and usefulness is now before you. Whatever direction you take, whatever course you adopt, it is in your power to become eminent. The first man in his profession is often absolutely, and always relatively, a great man. In this country particularly, every man has it in his power to be the architect of his own fortune. And when he rises, let him ascend the pyramid of greatness, not by the creeping tortuous windings of the reptile, but by the sublime flight of the bird of Jove. The eagle erects his aerie on the mountain top—looks at the sun with undazzled eyes, and defies the thunder and the storm. The serpent creeps on the earth, hides in the cavern, and sinks into torpidity.

Without referring to the inducements for exertion arising from the successful enterprizes of our citizens at home, it must be sufficient to animate you to active industry, by pointing out the harvest of profit and glory which has been reaped abroad. *West*, of Pennsylvania, has delighted and astonished the world, by his pictorial performances. *Murray*, of New-York, has written the best work on English Grammar, evincing a mind of the most lucid, discriminating and arranging constitution, and he is now enjoying the rewards of his piety and erudition, in the smiles of an approving conscience, and the plaudits of good men. *Perkins*, of Massachusetts, is now

* Bacon.

pushing that wonderful invention, the steam engine, to the utmost verge of perfection. Many of our enterprising youth are now traversing sea and land in the pursuit of science—some are seated in the celebrated schools of medicine and natural science—some are in the great cities, examining the fabrics of art, the machinery and processes of manufacturing, the movements and evolutions of commerce, and the complex relations of political economy. Others are moving in various directions, improving their information in agriculture, their taste in the fine arts, and adding to their knowledge of men and things. A late writer* mentions that at a popular point of his tour in Switzerland, it appeared from a register which he consulted, that even in that sequestered region the proportion of American travellers was respectable.

The revolution in navigation is the most astonishing portion of history. Wherever great communications can be maintained by water, the seats of commerce and navigation, of dense population and extensive dominion, will be established at those places. Before the discovery of the magnet, navigation was generally within sight of land. Who does not smile when he reads of the ten years wanderings and sufferings of Ulysses from Ilium in Asia Minor to the little Island of Ithica, which, within a few years, has been taken possession of by a British Sergeant and his guard,† and of the terrific and appalling adventures of the pious Æneas in a voyage from the former place to Italy? If an epic poem were now written, conceived by the sublime genius of Homer, and matured by the embellished taste and correct judgment of Virgil, describing in “thoughts that breathe and words that burn,”‡ the voyage of a hero full of emprise and pregnant with danger, from the city of New-York to the Island of St. Domingo, or the mouth of the Mississippi, (the full distance of the progress of Ulysses and Æneas,) although it might be sustained by all the interest arising from important episodes and preternatural machinery, yet the essence of the poem would be so absurd that no genius or management could protect it from

* Simond.

† Hobhouse's Travels.

‡ Gray.

the hue and cry of universal contempt. The Mediterranean sea was the locus of ancient navigation, and on its borders sprung up in succession, the four great monarchies—the Assyrian, the Persian, the Grecian and the Roman : and “all our religion—almost all our law—almost all our arts—almost all that sets us above savages, have come to us from the shores of the Mediterranean.”* The mariner’s compass has opened the gates of the great oceans, and the enterprising spirit formerly imprisoned in a small space, has spread over the globe, carrying with it the riches of commerce and the refinements of knowledge. A voyage to Europe is now considered an excursion of pleasure : a voyage to China is viewed as a common occurrence, and even a voyage of circumnavigation round the globe, which was formerly contemplated with more apprehension than all the labors of Hercules, passes without much observation. This spirit has extended to all modes of travelling, and all objects of discovery. The application of steam to the propulsion of boats—the establishment of swift packets, the improvement of natural and the creation of artificial water courses, have produced the approximation of remote places and substituted contiguity in lieu of distance. In former times, and within the recollection of some who hear me, a voyage to Oswego, or a journey to Niagara, was considered a difficult and bold enterprise, and the Island of Michilimackinack was viewed as the ultima Thule of America.—All parts of the world are now explored by American enterprise : and if we reap so nobly the fruits of our industry and capacity in exertions abroad, a much more extensive harvest of glory remains for our operations at home.

Linnæus has truly observed, that “what we know of the Divine works, are much fewer than those of which we are ignorant.” The first edition of his *Species Plantarum* contained only 7300 plants, and now upwards of 50,000 are enumerated ; and it is almost certain that our forests, our marshes, and our mountains, contain the most interesting non-descripts. Zoology has been very partially cultivated. Almost all our

* Dr. Johnson

mammalia, many of our fishes, amphibia and birds, have been arranged and described. Entomology has been, I may say, altogether overlooked; and mineralogy and geology present unbounded scope for investigation. In some of our great seminaries of instruction, the elements of natural science are taught, and our young physicians generally go into active life with initiatory information. We have lyceums established in various places, which will serve as schools of natural history, and as depositories of its treasures. Wherever a subject has been properly and scientifically described, it can always be recognized from the description. But here the functions of the philosopher do not terminate: The species is, to be sure, determined—its generic character ascertained, and it is enrolled by a name in its appropriate order and class, but a still more expanded field of observation and inquiry remains: you are introduced to a stranger—his name is announced, and you have observed his external form and manners: but can you be said to understand his character until you have sounded the depths and shallows of his mind, and examined the good and bad qualities of his heart—the variations of his conduct—the impulses, predilections and prejudices which tinge the colour of his life, and the variety of lights and shades which enter into the composition of his character? In like manner, you see a mineral, a plant, or an animal—may learn its name, and understand its scientific arrangements; but your knowledge of it would be very imperfect, and almost altogether useless, unless you proceed further, and investigate its habitations and localities—its properties and uses—and if an organized being, its manners, its morals, and its habits. And owing to the neglect of these obvious and important considerations, natural science has not attained its merited rank in the scale of utility, and in the estimation of the public. The prodigal creation of genera—the preposterous multiplication of species—the adoption of new nomenclatures—the augmentation of synonymes—and the conversion of varieties into species, and of species into genera, have darkened the science with myriads of useless and barbarous terms—have

sullied its lustre, and depreciated its sterling merits. "If every minute difference, every trifling variation," said Linnæus in a letter to Haller, "is to establish a new species, why should I delay to exhibit ten thousand such species?"

Vanity furnishes a sufficient fund of inducement for this ridiculous course. A new species, or a new genus, entitles the nomenclator to the honours of a discovery; and in acting the godfather, he will probably select the name of a friend, and expect in time the return of the compliment. The dealers in specimens, have also a direct interest in the increase and confusion of nomenclature: For every new name of the same substance, an addition may be made to the stock of their commodities, and the range of their sales. But the honours of a new system of arrangement are too flattering and transcendent not to be attempted; and the consequence is, that the system of Linnæus has been mutilated, and in a great degree displaced, and new ones substituted, which have introduced the reign of chaos and old night, into natural science. It has indeed in some instances been judiciously modified, and greatly meliorated. But better for the cause of knowledge to have an uniform system, with many defects, than to be perplexed and embarrassed with a diversity. We can travel on one highway without losing ourselves, but if we are bewildered by many roads and bye-paths, our progress will be slow, uncertain and erroneous. When philosophy consists in words and not in things, it loses its body and becomes a shadow—it changes the real for the nominal: And it is not too uncharitable to say, that the philosophers of terminology assume the physiognomy of knowledge and conceal the absence of ideas by the use of hard words, as the cuttle-fish merges itself in concealment by the dark fluid which it emits.

This endless jargon of nomenclature—this "*rudis indigestaque moles*"* of science, has imposed a moral duress upon the freedom of the mind: and the votary of nature cannot penetrate the adytum of its holy temple, without encountering the same obstacles which the knight of chivalry had to sur-

* Ovid.

tain, when he endeavoured to force his way into an enchanted castle, through the opposition of dragons, lions, giants and genii, gorgons, hydras, and chimæras dire : and the human mind, borne down with a load of verbiage, is doomed to suffer an intellectual torture, like prisoners in England, who on their arraignment, refusing to plead, and standing mute, were sentenced to undergo the *peine forte et dure*, and to be smothered to death under weights piled on their recumbent bodies. And unquestionably, these innovations are as deteriorating as the scholastic philosophy introduced by the commentators on Aristotle—a philosophy of words and notions—distinctions and subtelties—abstract ideas, and occult qualities—that either covered the intellectual world with darkness, or glimmered like shadows in the twilight, which the eye could hardly distinguish from the surrounding gloom. All such proceedings would indicate “as if there were sought in knowledge a couch whereupon to rest an uneasy spirit ; or a terrace for a wandering mind to walk up and down with a fair prospect ; or a tower of state for a proud mind to rest itself upon ; or a fort, or commanding ground, for strife and contention ; or a ship for profit or sale, and not a rich store-house for the glory of God, and the benefit of man.”*

Shall we then call on some transcendant genius to dispel the darkness ? Some intellectual Hercules, to purify the Augean stable ? Some mighty Bacon to act the great deliverer ?

The great deliverer he ! who from the gloom
Of cloister'd monks and jargon-teaching schools,
Led forth the true philosophy,—here long
Held in the magic chain of words and forms,
And definitions void : He led her forth,
Daughter of heaven :—That, slow ascending, still
Investigating sure the chain of things,
With radiant finger points to heav'n again.†

This gloomy representation must not, however, produce despondence, and the amateur need not take the Leucadian leap, in despair of attaining the object of his fond devotions.

* Bacon,

† Thomson,

The leading savans of France have combined to restore the botanical part of the Linnæan system. A general disgust is rising up against the mummary of science, and time and light will soon exercise a sanative power over the disease.

Some foreign governments have now in this country, agents to collect our productions. Scientific foreigners are now exploring it with microscopic eyes, and some standard works have proceeded from their pens. *Pursh*, and the *Michaux* in botany, and *Wilson* in ornithology, may be mentioned as peculiarly meritorious.

Mineralogy has also attracted great attention from abroad, as well as at home. And we can boast of *Cleaveland*, whose work gives an admirable view of the science: and of *Silliman*, in natural history generally, whose periodical publications reflect lustre on the investigating spirit of our country. It requires more practice than genius to detect the nature of minerals; and no person need despair of success, whether he proceed to the developement by external appearance, chemical analysis, crystalline structure, or optical character. Geology treats of the structure and relative position of the substances which compose the crust of the earth—forms an admirable illustration of the power, wisdom, and benevolence of the Deity; and so far as it rests on ascertained phenomena, is in perfect accordance with the cosmogony of Moses. In cultivating it, we ought particularly to follow the inductive mode of Bacon, and to attend exclusively to facts. It may amuse the imagination to read the romances of scientific men, in the shape of theories of the earth. Whether this earth is an extinguished sun, or a vitrified globe, or an animal possessed of living faculties, or a splinter of the sun, or a concoction of chemical affinities and mechanical deposition, or, by falling into the great deep, has been split into a thousand fragments, or been disorganized and shattered by the impingement of a comet, are inquiries little calculated to instruct the understanding. The specious figments of genius, and the erratic flights of philosophy, may excite our wonder, but they cannot stand the ordeal of scrutiny, or the Lydian touch of experiment.

Time will scarcely permit even a short allusion to the exact sciences, agriculture and the mechanic arts, polite literature, the fine arts, and political philosophy : all of which open subjects of the most interesting character, that bear directly upon the general welfare ; and all of them present the strongest incentives to the love of fame,* which is the great principle of the noble mind, and the last that it resigns. It is a common remark, that, "*nihil dictum quod non dictum prius*," and some are even so absurd as to suppose, that the stock of original ideas is exhausted. Much, no doubt, has been anticipated, but it is equally true that much remains untouched and unnoticed. Some of the greatest discoveries have been so contemporaneous, that it has been impossible to establish a charge of plagiarism. Many ideas are original, as it respects the author, and yet are not new : in which case the conception is more vivid, and the impression more powerful, than when of a derivative character. The infinite combinations of which the mind is susceptible—the lights and shades which the imagination can cast upon all subjects, and the powerful action of the understanding, in measuring the relations of ideas—in surveying the constitutions of things—in penetrating the secrets of nature, and developing the properties of mind and matter, furnish conclusive evidence of the progressive improvement of our faculties, and of their capacity to elicit new ideas on all subjects, and to make discoveries of all kinds. Some inventions are the offspring of accident, as gunpowder, printing, and the mariner's compass. Others, are the result of a happy impulse. Some assume maturity at the first inception, like Pallas, who sprung from the head of Jove, completely armed with the panoply of wisdom. While most discoveries have proceeded gradually to perfection, like our majestic Hudson, which, although small in its origin, yet, by the addition of fresh streams in its career to the ocean, becomes at last able to bear ships of the greatest burden. We are as prone to shoot beyond, as to shoot short of the mark ; and nothing is more pernicious to the discovery of truth, than

* Tacitus.

a refining and sophisticating spirit, which infects every subject with its perverse and diminutive views. An illustrious writer* has well observed, that "men are accustomed to take a prospect of nature from some high tower, to view her at a distance, and to be too much absorbed in generalities. Whereas if they would vouchsafe to 'descend, approach nearer to particulars, and more exactly and considerately look into things themselves, there might be a more true and valuable comprehension and discovery." And let it be understood, "that the wonders of nature lie out of the high road and beaten paths, so that the very absurdity of an attempt may sometimes be felicitous."* The mind, matured by deep and continual meditation—enlightened by wise and learned conversation—and fertilized by judicious and extensive reading, resembles that splendid metal which was formed from the fusion of many minerals in the great conflagration at Corinth. Like the crucible of the alchymist, it will indeed aspire to creative power: like the deflagrator and the galvanic battery, it pursues nature into the most occult recesses, and tortures her into a confession of her most important secrets; and like the poet's eye, it glances from heaven to earth, from earth to heaven, and as imagination bodies forth the forms of things unknown, turns them to shape, and gives to airy nothing a local habitation and a name.†

Let us then be vigilant and active in the great and holy cause of knowledge. The field of glory stretches before you in wide expanse. Untrodden heights and unknown lands surround you. Waste not, however, your energies on subjects of a frivolous nature, of useless curiosity, or impracticable attainment. Books have been multiplied to designate the writer of Junius—the Man in the Iron Mask has exercised the inquisitorial attention of Europe—and perpetual motion, the philosopher's stone, and the immortal elixir, have destroyed the lives and fortunes of thousands. Genuine philosophy has sometimes its aberrations, and like the Spartan king or Roman emperor, mingles in the amusements of children. The

* Bacon,

† Shakspeare.

sceptre of science is too often surrounded by toys and baubles, and even Linnæus condescended to amuse his fancy with the creation of vegetable dials and oriental pearls. Innovation without improvement, and experiments without discoveries, are the rocks on which ingenuity is too often shipwrecked.

“Omne ignotum pro magnifico,”* said the profound historian of Rome. Wonder is the child of ignorance, and vanity the offspring of imbecility. Let us be astonished at nothing but our own apathy; and cease to be vain even of our virtues. The fragrance of the humble lilly of the valley, and of the retiring eglantine of the woods, is more grateful to genuine taste, than the expressed odour of the queen of flowers, or the most costly products of the chemical alembic.

In our literary pursuits, let us equally reject a blind credulity that believes every fable, and a universal pyrrhonism that repudiates all truths—a canine appetite which devours every thing however light, and digests nothing however alimentary—and a fastidious taste, which delights not in the nutritious viand, but seeks its gratification in the aromatic dessert.

The waters of ancient learning ought to be drunk at the fountain head in preference to the streams. We are too prone to rely on references, quotations, abridgments and translations. The consequence is, that the meaning of the original frequently reaches us in a perverted or erroneous shape—its ethereal spirit evaporates by a change of conveyance, and we lose our acquaintance with the learned languages. A fault equally common, and more humiliating is an idolatrous veneration for the literary men of Europe. This intellectual vassalage has been visited by high-toned arrogance and malignant vituperation. Harmless indeed is the calumny, and it recoils from the object like the javelin thrown by the feeble hand of old Priam; but it ought to combine with other inducements to encourage a vernacular literature, and to cause us to bestow our patronage upon more meritorious works of our own country. We have writers of genius and erudition, who form a respectable profession. Some have ascended the empyreal heights of

* Tacitus.

poesy, and have gathered the laurel wreaths of genius ; others have trodden the enchanted ground of fictitious narrative, and have been honored by the tears of beauty and the smiles of virtue—while several have unfolded the principles of science, literature, philosophy, jurisprudence and theology, and have exalted the intellectual glory of America ; let us cherish the hope, that some at least will devote their faculties to improve those arts and sciences on which the substantial interests of our country so greatly depend. I refer particularly to agriculture, civil engineering, and naval architecture. Let us also trust that some vigorous minds will apply their powers to the illustration of our history. It has been said, with more point than truth, that the annals of modern colonies afford but two memorable events—the foundation, and the separation from the parent country.* If this observation had been so qualified as to refer to those occurrences as the most memorable, not as the only memorable events, it would undoubtedly have been correct. The colonial history of New-York, although imperfectly executed, and brought down only to 1732, is fertile of instruction and replete with interest. The translations of the erudite *Vanderkemp*, and the collections of the Historical Society of New-York, have furnished the most ample materials ; and whenever it is given to the world by a master hand, it will be a complete refutation of the remark which I have quoted. Is it too much to say, that we have no good history of the United States, and that the best account of our independence is written by Botta, an Italian ? At this moment, a respectable mechanic of the city of London is collecting materials for writing our history. He is favourably noticed by distinguished members of Parliament ; and although his mind has not been disciplined by a liberal education, yet its productions display vigorous and cultivated powers. Let this stimulate us to similar and animated exertions, and let not our writers despair of ultimate success, even if their efforts are attended with partial failures. Experience certainly brightens the vista of futurity ; but they must expect

* Humboldt.

that their fate will be determined sooner or later by intrinsic merit. Those writings that emit no effulgence, and communicate no information, will fall still-born from the press, and plunge at once into the abyss of obscurity. Others again will dazzle as they glide rapidly over the literary horizon, and be seen no more. Some, after basking in the meridian sunshine, will gradually undergo a temporary eclipse; but time will dispense justice, and restore their original splendour.

So sinks the day-star in the ocean's bed,
And yet anon repairs his drooping head,
And tricks his beams, and with new spangled ore,
Flames in the forehead of the morning sky.*

A fortunate few are always in the full blaze of sublime glory—they are the phoenixes of the age—the elect of genius, and the favorites of nature and of heaven.

There is nothing “under heaven’s wide hollowness”† which does not furnish aliment for the mind. All that we observe by the organs of sense, and all that we perceive by the operations of the understanding—all that we contemplate in retrospect, at the present or in the future, may be compounded or decomposed in the intellectual laboratory, for beneficial purposes. The active mind is always vigilant, always observing. The original images which are created by a vivid imagination—the useful ideas which are called up by memory, and the vigorous advances of the reasoning power into the regions of disquisition and investigation, furnish full employment for the most powerful mind; and after it is fully stored with all the productions of knowledge, then the intellect has to employ its most important functions in digesting and arranging the vast and splendid materials. And if there be any thing in this world which can administer pure delight, it is when we summon our intellectual resources, rally our mental powers, and proceed to the investigation of a subject distinguished for its importance and complexity, and its influence on the destinies of man.

* Milton,

† Spenser.

If science were to assume a visible form, like the fabled muses of the ancient mythology, all men would be ready to exclaim with the poet—

———Her angel's face,
As the great eye of heaven shined bright,
And made a sunshine in a shady place ;
Did never mortal eye behold such heavenly grace.*

But alas ! it is a blessing not without its alloy. Its sedentary occupations, and its severe exercises of the mind, impair the health : and hypochondria, the Promethean vulture of the student, poisons for a time all the sources of enjoyment. Add to this, the tortures of hope deferred, and of expectation disappointed. After nights without sleep, and days without repose, in the pursuit of a favourite investigation—after tasking the mind, and stretching all its faculties to the utmost extent of exertion, when the golden vision of approaching fame dazzles the eye in the distance, and the hand is extended to taste the fruit and to reap the harvest, the airy castles, the gorgeous palaces of the imagination, vanish like enchanted ground, and disappear like the baseless fabric of a vision.

From such perversities of fortune, the sunshine of comfort may, however be extracted. In the failure of a scientific investigation, collateral discoveries of great moment have been made. And as an eminent philosopher† has well remarked, “What succeeds pleaseth more, but what succeeds not, many times informs no less.” And in the worst position, the mind is improved, sharpened, expanded, brightened, and strengthened, by the processes which it has undergone, and the elaborations which it has experienced.

We must not then expect
A perpetual feast of nectar'd sweets,
Where no crude surfeit reigns.‡

But we may confidently pronounce, that a cornucopia of blessings will attend the diffusion of knowledge—that it will have an electrifying effect on all sources of individual happiness and

* Spenser.

† Bacon.

‡ Milton.

public prosperity—that glory will follow in the train of its felicitous cultivation, and that the public esteem, in perennial dispensation, will crown its votaries.

This state enjoys a temperate climate and a fruitful soil, and situate between the great lakes on the north and west, and the ocean on the south and east, ought always to be the seat of plenty and salubrity. It requires nothing but the enlightened evolution of its faculties and resources to realize the beautiful ideal of perfection; and the co-operation of man with the bounty of Providence, will render it a terrestrial paradise: and this must be effected through the agency of intellectual, operating on physical exertion.

In this grand career of mind, in this potent effort of science, in this illustrious display of patriotism, contributions will flow in from all quarters, The humble mite will be acceptable as well as the golden talent. And the discriminating, perspicacious and comprehensive eye of intellect will find

Tongues in trees; books in the running brooks;
Sermons in stones; and good in every thing.*

Indeed, the very ground on which we stand affords topics for important consideration and useful application. This city was among the earliest seats of European settlement. It was at the head of a great portage, reaching from the termination of the navigable waters of the west, to the head waters of the Hudson. It was the great entrepot of the valuable trade in furs and peltries, and the thoroughfare of commercial adventures, of scientific explorations, and of military expeditions. In 1690, it was destroyed by an irruption of French and Indians. The lives of many of its inhabitants were saved as it were by a special interposition of Providence. And the sympathising and pathetic speech of the faithful Mohawks on that melancholy occasion, may be ranked among the most splendid effusions of oratory.† The alluvial lands of the river, rich as the soil formed by the overflowings of the Nile, were the principal residence of that ferocious and martial race, the true old

* Shakespeare.

† Colden's History of the Five Nations.

heads of the Iroquois—a confederacy which carried terror, havoc and desolation from the Gulph of St. Lawrence to the Gulf of Mexico ; and which aspired to universal empire over the savage nations. How astonished would that people be, if they could be summoned to life, to witness the flowing of the waters of the west through this place, seeking, in a navigable shape, a new route to the Atlantic ocean—carrying on their bosom the congregated products of nature and art, and spreading as they proceed wealth and prosperity.

All alluvial ground formed by streams emanating from a distance and reinforced in their transit by auxiliary waters, must be fertile not only in soil, but abundant in the various productions of the vegetable kingdom. The germs of plants will be transported from remote quarters ; and the gorges and ravines, formed in many places by intersecting streams, will not only protect particular spots from the ravages of the plow, but open the treasures of the mineral kingdom by the profound excavations of the water and the transportation of distant fossils. Here, then, is a proper region for interesting discovery. Strange trees now flourish on the banks of the river ; many a flower is born to blush unseen, and many a curious production has never undergone scientific scrutiny.

Here has been established a great seminary of education, which in less than thirty years has risen to an extraordinary altitude of excellence—which unites the ardour of youthful enthusiasm with the wisdom of experienced longevity, and the celebrity of confirmed usefulness—and which, by an able diffusion of the light of knowledge and a dexterous management of the helm of government, has already produced scholars who adorn and illumine the walks of science and literature—the pursuits of professional life, and the councils of our country.

In this vicinity flourished Sir *William Johnson*, one of the extraordinary characters of our colonial history. He settled near the banks of the Mohawk, and from humble beginnings he acquired great celebrity, particularly in war—immense wealth, and the favour of his sovereign. Auspicious events, in occurrence with a paramount influence over the Indians,

and great energy of character, laid the foundation and erected the superstructure of his fortunes. In this place lived and died that eminent servant of God, the Rev. *Dr. Romeyn*, the fragrance of whose virtues is still cherished in your hearts and felt in your lives. His venerable form—his dignified deportment—his eye beaming goodness and his voice uttering wisdom, are still fresh in your minds; so impressive is the power of combined virtue and intelligence. Dr. Dwight the greatest theologian of the age, has pronounced his eulogium; and it remains for biography to perform its functions, and to fill up the outlines so ably drawn by one of the most acute observers and profound thinkers which our country has produced.*

Finally, whatever may be our thoughts, our words, our writings, or our actions, let them all be subservient to the promotion of science and the prosperity of our country. Pleasure is a shadow; wealth is vanity, and power a pageant—but knowledge is extatic in enjoyment, perennial in fame, unlimited in space, and infinite in duration. In the performance of its sacred offices, it fears no danger, spares no expense, omits no exertion. It scales the mountains, looks into the volcano, dives into the ocean, perforates the earth, wings its flight into the skies, encircles the globe, explores sea and land, contemplates the distant, examines the minute, comprehends the great, and ascends the sublime. No place too remote for its grasp—no heavens too exalted for its reach. “Its seat is the bosom of God—its voice the harmony of the world. All things in heaven and earth do it homage, the very least as feeling its care, and the greatest as not exempt from its power. Both angels and men and creatures, of what condition soever, though each in different sort and manner, yet all, with uniform consent, admiring it as the parent of peace and happiness.”†

* Dwight's Travels.

† Hooker.





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